Department of Energy
Office of Science
Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

March 29, 2022

Ms. Martha Michels
Chief Operating Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

SUBJECT: FERMI NATIONAL ACCELERATOR LABORATORY RADIATION PROTECTION PROGRAM

Dear Ms. Michels:

The Department of Energy (DOE) Fermi Site Office (FSO) fully aligns with the Fermi Research Alliance's (FRA) intent (quoting FRA policies and procedures) to:

> "…do research in a manner such that the safety of personnel and the protection of the environment receives the highest consideration while at the same time we pursue excellence in the use of our Laboratory facilities."
>
> "...assure the implementation of the Laboratory's program for maintaining radiation exposures as low as reasonably achievable ALARA"
>
> ".. <protect> members of the public and the environment against undue risk from radiation."

DOE's authority to set operational and radiological limits stems ultimately from its role as regulator under the Atomic Energy Act of 1964. At present, FRA can conduct accelerator operations up to the limits of the Fermilab Safety Assessment Document (SAD) and the DOE approved Accelerator Safety Envelope (ASE), as such this establishes the bounding case for operational and accident conditions.

In keeping with the principles of as low as reasonably achievable (ALARA), FRA's expectation that, "no individual shall be exposed to radiation unnecessarily", aligns with DOE expectations to protect workers, the public, and the environment. However, a fundamental premise of protection is awareness of the hazard. Only through awareness of the hazard can workers and the public seek to minimize or avoid radiation exposures.

Recent FRA surveys have highlighted to DOE the following concerns:

1. Multiple locations of radiation emission above background without signage (in at least an OSHA 1910.145b context), or warning to denote exposure to a hazard or a need to limit exposure times.

2. Bounding radiation exposure potential at up to 25 times the allowed public limit (which is 257 times the minor exposure limit) without positive measures to prevent exposures above the limit to all members of the public or limit exposure to workers.
3. Unmarked and/or segregated locations meeting the definition of controlled areas.
4. Potential for unintended radiological workers or staff routinely in these locations.
5. Multiple definitions of "public" in use at the laboratory with differing degrees of training, access, and exposure potential (for example: the public may or may not include students, users, delivery staff, guests, visitors, vendors, regulators, utility workers, residents, daycare, construction staff, etc. based on the desired approach).

DOE hereby requests a plan of action from FRA to be delivered to FSO within 30 days to address the concerns raised in this letter.

If you have any questions, please contact Rachel Madiar, of my staff, at extension x2449.

Sincerely,

ROGER SNYDER

Digitally signed by ROGER SNYDER
Date: 2022.03.30 14:22:55 -05'00'

Roger E. Snyder
Acting Site Office Manager

Cc:
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